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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/630,044

07/30/2003

Jen-Huang Albert Chiou

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05/17/2004

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EXAMINER

KWOK, HELEN C

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,044

Applicant(s)

CHIOU, JEN-HUANG ALBERT

Examiner

Helen C. Kwok

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/30/03
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,349,855 (Bernstein et al.).

With regards to claims 1 and 4-5, Bernstein et al. discloses a micromechanical angular rate gyro sensor comprising, as illustrated in Figures 1A-2, a substrate made of glass; a pair of proof mass 112 made of silicon are suspended above the substrate and is attached to the substrate at fixed anchor points 120; a set of drive beams 140 positioned between the proof masses wherein the drive beams having a longitudinal body portion (the part going up and down from the page) extending along a first direction; a flexible spring member (the part going left and right from the page) that extends along a second direction perpendicular to the first direction wherein the flexible spring member is serpentine in shape. (See, column 4, line 50 to column 5, line 59).

With regards to claims 6, 7, Bernstein et al. further discloses a first pair of electrode combs (not numbered; however, these are the interdigitated comb electrodes on each sides of the proof masses) to drive the proof masses in a first plane; a second pair of electrode combs 114 for sensing the movement of the proof masses in the first

plane; and a pair of out-of-plane electrodes 116 for sensing movement of the proof masses in a second plane. (See, column 4, lines 50-62).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-3 and 8-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,349,855 (Bernstein et al.).

With regards to claims 2-3, Bernstein et al. further discloses at least one base beam 124 having a second longitudinal body portion extending along the second direction interconnects the set of drive beams. The only difference between the prior art and the claimed invention is the base beam has a second flexible spring member in a serpentine shape that extends along the first direction. It would have been obvious to a person of ordinary skill in the art at the time of invention to have readily recognize the advantages and desirability of providing a plurality of folded spring members (i.e. serpentine shape) to the base beam to yield greater compliance in the in-plane direction while minimizing the overall size of the springs.

With regards to claims 8-14, the claims are commensurate in scope with claims 1-7 and are rejected for the same reasons as set forth above.

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With regards to claims 15-21, the claims are commensurate in scope with claims 1-7 and are rejected for the same reasons as set forth above. Furthermore, Bernstein et al. suggests a digital processing unit 62,72.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

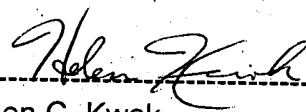
The references cited are related to tuning fork gyroscopes.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen C. Kwok
Art Unit 2856

hck
May 12, 2004